

DREDGED MATERIAL MANAGEMENT PLAN and ENVIRONMENTAL IMPACT STATEMENT MIAMI RIVER, MIAMI-DADE COUNTY, FLORIDA

1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

The Miami River flows naturally in a southeasterly direction and discharges into Biscayne Bay near the Port of Miami. The study area is located in the first 5.5 miles of the Miami River along the existing Federal channel. The existing Federal project for Miami River provides for a navigation channel 15 feet deep throughout its 5.5-mile length. The bottom width varies. It originates with a 150-foot bottom width at the river's confluence with Biscayne Bay, and it continues at that width for the first three miles, thence 125 feet for the next 1.1 miles, thence 90 feet wide for the last 1.4 miles. The existing project is shown in Figure 1.

1.2 SCOPE OF STUDY

It is the U.S. Army Corps of Engineers' (USACE) policy to prepare dredged material management plans for all Federal navigation projects to assess the continued viability of the project with available dredged material disposal capacity sufficient to accommodate 20 years of maintenance dredging. The 1993 report, *Alternatives for the Dredging and Disposal of Sediment from the Miami Harbor (Miami River) Project, Florida*, identifies significant problems for the continued maintenance of this project and the need to perform detailed material management studies. The scope of this study is to conduct technical studies and analyses to establish project features and elements that will form the basis for the preparation and implementation of a dredged material management plan (DMMP).

This project includes the single Federal project and associated permitted dredging adjacent to the Federal channel and coincident with existing bulkheads and docks.

USACE's policy (EC 1165-2-200, July 1994) requires each of its districts to prepare a DMMP to maintain Federal navigation channels for at least 20 years. The goal is to accomplish the disposal of dredged material from navigation projects in the least costly manner consistent with sound engineering practice and meet all Federal environmental standards, including the standards established by Section 404 of the Clean Water Act and Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended. The DMMP will identify the amount of material that needs to be dredged to maintain the Federal channel and the manner in which the dredged material will be managed using cost-effective and environmentally acceptable methods. The management plan identifies specific measures necessary to manage the volume of material likely to be dredged over a 20-year period from maintenance dredging.

The development of the DMMP will involve planning with a 20-year horizon. This foresight ensures that the dredging of the navigation channel is completed in a timely, yet efficient manner. The efficiency is measured not only by the precision and by accuracy of the dredging, but also by the amount of environmental protection provided, ensuring the environment is protected. The manage-

ment of the dredged material serves a dual purpose. The primary purpose would be improvement of navigation, creating accessibility to and from Biscayne Bay and the Atlantic throughout the tidal cycle. The secondary purpose is the removal of contaminated sediments from the Miami River. Resuspended sediments are transported from Miami River to Biscayne Bay on the outgoing tides and riverine flood flows.

1.3 STUDY AUTHORITY

1.3.1 Initial Authorization

The United States Congress has shown a continuing interest in improvements to the Miami River for navigation, pollution abatement, and other allied water purposes. With near concurrent resolutions, the Committee on Public Works of the United States Senate on March 24, 1972, and the Committee on Public Works of the United States House of Representatives on June 14, 1972, adopted authorizations to address those concerns. Those resolutions provided the means for the USACE to investigate the water and land related resource problems and opportunities along the Miami River.

RESOLVED BY THE COMMITTEE ON PUBLIC WORKS OF THE UNITED STATES SENATE, *That the Board of Engineers for Rivers and Harbors, created under the provisions of Section 3 of the River and Harbor Act, approved June 13, 1902, be, and is hereby, requested to review the reports of the Chief of Engineers on Miami Harbor, Florida, published as Senate Document Numbered 93, Ninetieth Congress, and other pertinent reports, with a view to determining whether any modifications of the recommendations contained therein are advisable at the present time, in the interest of navigation, pollution abatement, and other allied water purposes.*

RESOLVED BY THE COMMITTEE ON PUBLIC WORKS OF THE HOUSE OF REPRESENTATIVES, UNITED STATES, *That the Board of Engineers for Rivers and Harbors is hereby requested to review the reports of the Chief of Engineers on Miami Harbor, Florida, published as Senate Document Numbered 93, Ninetieth Congress, and other pertinent reports, with a view to determining whether any modification of the recommendations contained therein are advisable at the present time, with particular reference to Miami River, in the interest of navigation, pollution abatement, and other allied water purposes.*

In the Water Resources Development Act (WRDA) of 1974, Congress reaffirmed its continuing interest in the Miami River Watershed by authorizing a feasibility study. The applicable paragraph of Section 11 of the WRDA of 1974 is cited below. The term "surveys" means feasibility studies.

SECTION 11. (b) The Secretary of the Army is hereby authorized and directed to cause surveys to be made at the following locations and subject to all applicable provisions of Section 110 of the River and Harbor Act of 1950:

Miami River, Florida, with a view to determine the feasibility and advisability of dredging the Miami River in the interest of water quality.

In the Water Resources Development Act of 1986, Congress again reaffirmed its interest for water resource improvement in the Miami River watershed by authorizing the removal of river sediments

from the Miami River and Seybold Canal, removal of abandoned vessels under the control of the United States from the Miami River, and participation in the establishment of the Miami River Water Quality Commission. The texts of the applicable sections are cited:

SEC. 1162. MIAMI RIVER SEDIMENTS.

Subject to Section 903(a) of this Act, the Secretary is authorized and directed to remove polluted bottom sediments from the Miami River and Seybold Canal in Miami, Florida, between the mouth of the Miami River and the salinity control structure at 36th Street. Local interests shall furnish all lands (including dredge disposal areas), easements, rights-of-way, relocations and alterations necessary for initial dredging and subsequent maintenance before the Secretary removes any such sediments. The non-Federal share of the cost of carrying out this section (including the contribution under the preceding sentence) shall be 25 percent.

SEC. 115. ABANDONED AND WRECKED VESSELS

The Secretary shall - (1) remove from the Miami River and Seybold Canal in Miami, Florida, between the mouth of the Miami River and the salinity control structure of 36th Street, any abandoned vessels and any vessels under the control of the United States by reason of their seizure or forfeiture; (2) remove derelict vessels from the western shore of Hempstead Harbor, New York; and (3) remove from waters off Mona Island, Puerto Rico, the abandoned vessel "A. Regina."

The Secretary shall enter into an interagency agreement to facilitate the removal of any such vessel under the control of the United States with the head of any Federal department, agency or instrumentality, which has control of such vessel. The non-Federal share of work authorized by this section shall be one-third, except that work authorized by paragraph (3) shall be at full Federal expense.

SEC. 1157. MIAMI RIVER WATER QUALITY COMMISSION

(a) The Secretary shall make a grant of \$50,000, subject to an appropriation for that purpose, to the Governor of the State of Florida for the establishment of a Miami River Management Commission to develop a comprehensive plan for improving the water quality of the Miami River, Florida, and its tributaries and managing all activities which affect the water quality and use of such river and tributaries. The commission shall be composed of seven members appointed by the Governor. A grant may be made under this section only after the State of Florida agrees to provide amount equal to the amount of the grant to carry out this section.
(b) There is authorized to appropriate to carry out this section \$50,000 for fiscal years beginning after September 30, 1986.

The original USACE Feasibility Study, initiated in 1974, concluded that the removal of contaminated sediments must be accompanied by non-Federal actions to control the introduction of pollutants into the Miami River to achieve the objectives of improving water and sediment quality. The study was placed in abeyance in 1977 pending those non-Federal actions. Upon initiation of regulatory and enforcement actions and completion of facility modifications, the study was resumed in 1985.

A Draft Feasibility Report, prepared and circulated in May 1986, concluded that no quantifiable National Economic Development Benefits could be identified for the Miami River sediment removal, and, therefore, the USACE could not recommend that dredging be accomplished. Local, state, and Federal agencies, except one, objected to the conclusions of the study. Proponent agencies stated that there is a need to remove sediments to improve water quality conditions within the area of the Miami River and Biscayne Bay and to avoid adverse economic impacts resulting from vessel draft restrictions.

In response to extensive public comments and to the new planning capabilities legislated in the WRDA of 1986, a new feasibility report was prepared and completed in 1990. The 1990 Feasibility Report concluded that there was no apparent justification for removing sediment to improve water quality or navigation. However, the report noted an apparent justification for maintenance dredging, which would enable deep draft vessels to use the Miami River in a more efficient manner.

1.3.2 Development History

The Miami River project was built during the mid-1930s when just over a million cubic yards (cy) of dredged material were removed at a total cost of about \$600,000. The USACE carried out a Congressional mandate to make the Miami River a Federal navigable waterway by dredging the river bottom to a depth of 15 feet. In 1945, the Miami River project became part of the Miami Harbor project through congressional authorization.

1.4 PROJECT PARTNERS

The local sponsor for this project is Miami-Dade County. Miami-Dade County has agreed to cooperate with the USACE to provide an acceptable interim upland staging area.

1.5 PURPOSE AND SCOPE

The Miami River Federal project does not have a DMMP or a disposal site for maintenance dredging. The sponsor has identified one potential interim upland staging area for this work.

A preliminary assessment has been conducted for the Miami River as part of the Miami Harbor project. This Management Plan Study will be used to the fullest extent possible and with, where applicable, information contained in the December 1993 report *Alternatives for the Dredging and Disposal of Sediment from the Miami Harbor (Miami River) Project, Florida*. The information will be updated to reflect correct conditions on the river and subsequent data collection efforts and studies that have completed since 1993. The scope of work addresses the work tasks, responsibility for their accomplishment and the schedule of performance. Technical studies and analyses are included to establish project features and elements that will form the basis for the preparation and implementation of a management plan.

1.6 POLICY REQUIREMENTS

- National Environmental Policy Act of 1969
- Endangered Species Act of 1973
- Fish and Wildlife Coordination Act of 1958
- National Historic Preservation Act of 1966 (Inter Alia)

- Clean Water Act of 1972
- Clean Air Act of 1972
- Coastal Zone Management Act of 1972
- Farmland Protection Policy Act of 1981
- Wild and Scenic River Act of 1968
- Marine Mammal Protection Act of 1972
- Estuary Protection Act of 1968
- Federal Water Project Recreation Act
- Fishery Conservation and Management Act of 1976
- Submerged Lands Act of 1953
- Coastal Barrier Resources Act and Coastal Barrier Improvement Act of 1990
- Rivers and Harbors Act of 1899
- Anadromous Fish Conservation Act
- Migratory Bird Treaty Act and Migratory Bird Conservation Act
- Marine Protection, Research and Sanctuaries Act
- Magnuson-Stevens Fishery Conservation and Management Act
- E.O. 11990, Protection of Wetlands
- E.O. 11988, Flood Plain Management
- E.O. 12898, Environmental Justice
- E.O. 13045, Protection of Children
- E.O. 13112, Invasive Species

1.7 PROJECT BACKGROUND DESCRIPTION OF EXISTING CONDITIONS

1.7.1 Description of Existing Conditions

The Miami River project study area is located between Biscayne Bay and the salinity control structure, within the City of Miami, Miami-Dade County, on the southeastern coast of Florida. The salinity dam, located 5.5 miles upstream near NW 36th Street, limits the navigable part of the river.

The Miami Canal, a major drainage from the Everglades Agricultural Area, is part of the Central and South Florida Project. The portion of the canal immediately upstream from the salinity control structure receives drainage from industrial, commercial, residential, and agricultural areas. Downstream from the salinity control structure there is extensive commercial, industrial, and residential development. Water dependent and water related commercial and industrial operations along the Miami River include commercial shipping, marinas, ship and boat yards, marine sales, boat manufacturing, and maritime services.

The mouth of the Miami River is located at the northwestern shore of Biscayne Bay. Across the bay, and approximately 2.5 miles from the mouth of the river, are the southern end of Miami Beach, Fisher Island, and Virginia Key. Biscayne Bay is an inlet of the Atlantic Ocean, and is partially separated from the ocean by a series of barrier islands. The southern region of Biscayne Bay is managed by the U.S. National Park Service as Biscayne National Park. The northern portion of the bay constitutes the Biscayne Bay Aquatic Preserve, which is managed by the State of Florida.

1.7.2 Maintenance Dredging History

The original, natural channel of the Miami River was located entirely within Miami-Dade County, Florida. The north fork of the Miami River originated at the “Miami River Rapids,” a depression in the Atlantic Coastal Ridge, which allowed impounded water of the Everglades to flow southeasterly approximately 4.5 miles to the mouth of the Miami River at Biscayne Bay. The south fork of the river originated in a similar manner approximately one-half mile to the south of the Miami River Rapids. In 1909, a new channel was cut through the Atlantic Coastal Ridge approximately 100 feet north of the Miami River Rapids as part of the Everglades drainage program, and the Miami River/Miami Canal was extended northward to Lake Okeechobee. The Miami River/Miami Canal is approximately 80 miles long.

From 1931-1933, the USACE dredged the Miami River to create a navigation channel that extends from the mouth of the Miami River approximately 5.5 miles to a salinity control structure near NW 36th Street. The Miami River navigation channel is 150 feet wide and 14-16 feet deep from the mouth of the Miami River to the south fork, 125 feet wide and 14-16 feet deep from the south fork to the Tamiami Canal, and 90 feet wide and 10-14 feet deep from the Tamiami Canal to the Seaboard Railroad Bridge near the salinity structure (Metropolitan Dade County Planning Department, 1962).

There has been no maintenance dredging of the Miami River since its creation as a Federal Navigation Project 70 years ago.

1.7.3 Historical Dredged Material Disposal Site Capacity and Usage

Since no maintenance has been performed on the Federal Navigation Channel on the Miami River in 70 years, there is not a historical dredged material disposal site.

During construction in the early 1930s, dredged material was placed near both banks of the Miami River along the project’s entire length. Areas of “dredged fill” are shown adjacent to both banks of the river in the November 1934, *Miami River, FLA-Conditions on Completion of Dredging of Channel Project* (“as-built”) attached as Attachment A.

Private dredging has occurred as needed outside the Federal Navigation Channel along bulkheads, docks, and boat slips. This activity is currently regulated by the USACE, the State of Florida Department of Environmental Protection, and Miami-Dade County, Department of Environmental Resources Management (DERM).

2.0 STUDY PLAN

2.1 QUALITY CONTROL PLAN

Coordination of all the various elements and components of the study is essentially a management activity. The study process must be kept in phase and on schedule to insure timely completion within budget. Without the proper timing and sequence of events, it is difficult to avoid delays in study completion and cost overruns. Management must be familiar with planning directives as well as all work element requirements and schedules to evaluate progress and measure the accuracy and completeness of results. The process is a continuous effort that involves adjustments to schedules and work to compensate for unexpected events causing delays and workload problems.

The draft report is the initial coordination document. Once the coordination process is complete, the comments are evaluated to determine the impact on study findings. Attachment B contains the Quality Control Plan (QCP) for the *Miami River Dredged Material Management Plan*. This plan is a dynamic document that is currently being revised to reflect personnel and schedule changes.